

Grade: 5

Title: Invasive Animals and Plants of the Swamps

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Student Learning Objective(s): The students will describe the consequences of invasive plants and animals in Louisiana's swamps.

LA GLE's

Grade: 5 # 50: Describe the consequences of several types of human activities on local ecosystems.

Materials needed:

- Internet Books about invasive species (these books will be displayed in the class for students to read or refer to)
- Posters
- Marker ***Aliens from Earth: When Animals and Plants Invade Other Ecosystems* Batten, M.**
- Sign cutouts ***Exotic Species: Invaders in Paradise* by: Guiberson, Brenda**
- Various art material

Detailed Procedure. Describe what the students will do in each stage. Include guiding questions you might ask to help students.

1. Engage:

Science Process Skills Indicate which science process skills students will develop in this part of the lesson.

- | | | | | | | |
|--|--|---|---|-------------------------------------|-------------------------------------|------------------------------------|
| <input type="checkbox"/> Observation | <input type="checkbox"/> Classification | <input checked="" type="checkbox"/> Communication | <input type="checkbox"/> Measurement | <input type="checkbox"/> Estimation | <input type="checkbox"/> Prediction | <input type="checkbox"/> Inference |
| <input type="checkbox"/> Identifying Variables | <input type="checkbox"/> Controlling Variables | <input type="checkbox"/> Defining Operationally | <input type="checkbox"/> Forming Hypotheses | | | |
| <input type="checkbox"/> Experimenting | <input type="checkbox"/> Graphing | <input type="checkbox"/> Modeling | | | | |

1. What do you think the word "invasion" means?
2. What do you think "invasive species" mean?
3. Finish this analogy for me; invasive species is bad for the environment as native species is _____ for the environment.
4. Students will finish discussing what they know about invasive species then the teacher will break them into their groups to complete their activity.

2. Explore:

Science Process Skills Indicate which science process skills students will develop in this part of the lesson.

- | | | | | | | |
|--|--|---|---|-------------------------------------|-------------------------------------|------------------------------------|
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| <input type="checkbox"/> Identifying Variables | <input type="checkbox"/> Controlling Variables | <input type="checkbox"/> Defining Operationally | <input type="checkbox"/> Forming Hypotheses | | | |
| <input type="checkbox"/> Experimenting | <input type="checkbox"/> Graphing | <input type="checkbox"/> Modeling | | | | |

1. The students will be broken into four (five depending on number of students) groups to explore invasive species introduced into the swamps.
2. The groups will randomly choose 1 of the 4 (5) invasive species to explore.
***Aquatic Plants: Alligator Weed---Water Hyacinth---Hydrilla**
***Aquatic Animals: Nutria---Bighead Carp**
3. The students will complete this activity by using the internet.
4. Using the internet site www.invasive.btnep.org and www.sgnis.org/kids, the students will find facts about their invasive species and create a way to introduce to their classmates the facts about their species.
 1. Groups may consider creating a poster to introduce their species. Students may print pictures off the internet or draw their pictures.
 2. Groups can create a bulletin/ newspaper article alerting people about their invasive species.
 3. Groups may want to present a news alert or interview about their species.
(role play news cast)
 4. Groups may create a wanted poster about their invasive species.
5. Students will include in their presentations the following:
 1. Every day and scientific name of their species.
 2. Place of Origin?
 3. How was the species introduced?
 4. How could the species be controlled?
 5. Problems it creates in the swamps.
 6. List two interesting facts about the species.

Students will be supplied with various art materials to assist with their activity

3. Explain:

Outline the line of questioning you will use to assist students in understanding the concept. List at least 5 good questions and identify the question category (Gallagher & Aschner) in which your question falls (see text, Figure 7.6).

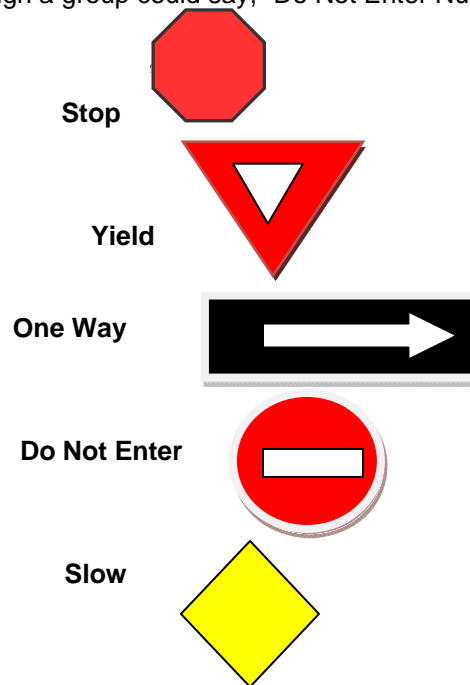
1. Define in your own words what a native species means. Invasive species. **Answers will vary according to what the student perceives the answer to be.**
2. Can anyone give me another name for an invasive species? **Exotic, Non-native, or Alien Species.**
3. Do you think there are any invasive species that may be beneficial to the environment? Do not just think about the swamps, think about different areas also. **Yes, depending on what it is and why it was introduced to an area.**
4. What is the most common way invasive species are introduced into an area? **Human introduction**
5. Are invasive species easy to get rid of? Explain? **No, they usually have few predators because they are not native to the area in which they were introduced.**

4. Expand:

Science Process Skills Indicate which science process skills students will develop in this part of the lesson.

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|--|--|---|---|-------------------------------------|-------------------------------------|------------------------------------|
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| <input type="checkbox"/> Experimenting | <input type="checkbox"/> Graphing | <input type="checkbox"/> Modeling | | | | |

1. Each group will create one sign suggesting a way to prevent invasive species they researched. The groups will come up with one slogan using the name of their sign to suggest a way to prevent invasive species from entering into the swamp's ecosystems.
2. The groups will choose from the signs below to use as their visual. (The teacher will have the shape of these signs cut out for the students prior to the activity.) Also supply class with an example. Ex: Using the Do Not Enter sign a group could say, "Do Not Enter Nutria, you are bad for our swamps."



**Students may use a sign that another group has chosen.*

5. Evaluate:

What exactly will you do, or what evidence/data will you collect, to ascertain whether the students can achieve the objectives you listed at the top of this lesson?

1. Students will be assessed during their presentation about their species.
2. Students will also be assessed during the explain phase of the lesson.
3. Teacher will also assess students' knowledge by walking around asking questions of each group.

Brain Compatible Learning Strategies Used in This Lesson:

- | | | | | |
|---|---|---|--|---|
| <input type="checkbox"/> Brainstorming/Discussion | <input checked="" type="checkbox"/> Drawing and Artwork | <input type="checkbox"/> Field Trips | <input type="checkbox"/> Games | <input type="checkbox"/> Graphic Organizers |
| <input type="checkbox"/> Humor | <input type="checkbox"/> Manipulatives, Experiments, Labs, Models | <input checked="" type="checkbox"/> Metaphors, Analogies, and Similes | | |
| <input type="checkbox"/> Mnemonic Devices | <input type="checkbox"/> Movement | <input type="checkbox"/> Music, Rhythm, Rhyme, and Rap | <input type="checkbox"/> Project/Problem-Based Instruction | |
| <input checked="" type="checkbox"/> Reciprocal Teaching, Cooperative Learning | | <input checked="" type="checkbox"/> Role Plays, Drama, Pantomimes | <input type="checkbox"/> Storytelling | |
| <input checked="" type="checkbox"/> Technology (student use) | <input type="checkbox"/> Visualization/Guided Imagery | <input checked="" type="checkbox"/> Visuals | <input checked="" type="checkbox"/> Writing/Journals | |

Lesson Source:

American Forest Foundation. (2009, 2008, 2007, 2006). Invasive Species- Activity 12. Project Learning Tree: Pre K – 8 Environmental Education Activity Guide. p. 59.

Louisiana's

Outstanding

Unbelievable

Inhabitants of the

Swamps

Including its

Amazing

Nature

And more!!!!

This sheet was used as the cover page for the student's learning log.

Name _____ Date _____

Questions corresponding to Lesson 1A

What animals and plants are found in your ecosystem?

Name ways in which the living and nonliving animals are working together in your ecosystem.

Where was your ecosystem found? (Look at the picture given to you to determine this)

Create a diagram of how the living and nonliving things in your ecosystem work together.

(Lesson 2A) Each group was given this sheet to complete their research. They were able to write on this.

- Every day and scientific name of species
- Place of origin
- How was the species introduced
- How could the species be controlled
- Problems it creates in the swamps
- List two interesting facts about the species

This was displayed on the Elmo for the students to see as I explained each

Create a poster to introduce their species
(Can print pictures of internet)

Create a bulletin/newspaper article alerting
people about their invasive species

Present a news alert or interview about
their species
(role play a newscast)

Create a wanted poster about species

The students were given a post it notes with their respected species to research. I put this on the Elmo for the students to see the websites they were to complete their research.

Alligator Weed

Water Hyacinth

Hydrilla

Nutria

Bighead Carp

Directions:

Go to [~~Invasive.btnep.org](http://Invasive.btnep.org)

Then click on Invasives in Louisiana

or

www.sgnis.org/kids